Montana
Office of Public Instruction
Denise Juneau, State Superintendent
opi.mt.gov

Content Standards Informer

Curriculum and Instruction Unit

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Montana Common Core Standards

Cynthia Green, English/Language Arts Curriculum Specialist
cgreen4@mt.gov and Jean Howard, Mathematics Curriculum Specialist
jhoward@mt.gov

Montana Common Core Standards Webinar Series: Located on the MCCS Webpage: http://MontanaCommonCoreStandards

- Spring 2012 Overview available in April
- Next Steps: Awareness, Planning and Alignment available in August
- Text Complexity available in April
- Writing available in May
- Literacy across the Content Areas available in June
- Mathematical Practices available in April
- Math Focus and Coherence: The Big Ideas and Learning Progressions available in May
- Math High School Courses available in June

MCCS Summer Professional Development Opportunities

Mathematics Common Core: **K-5 Professional Development Academy**

June 24-26, 2012, Montana Learning Center, Helena, Montana

Details located on the OPI Calendar: http://opi.mt.gov/Curriculum/Index.html?gpm=1_8

Mathematics Common Core: **6-12 Professional Development Academy**

June 24-26, 2012, Billings, Montana. Details located on the OPI Calendar:

http://opi.mt.gov/Curriculum/Index.html?gpm=1_8

Montana Educators' Institute: June 12-14, 2012, Helena, Montana. www.mtascd.org

Regional Service Area III Institute: June 4-7, 2012, Billings, Montana.
http://www.msubillings.edu/smart/

Regional Service Area IV Institute: June 11-13, 2012, Dillon, Montana.
http://www.resa4u.org/

Montana Instructional Innovations: August 6-8, 2012
http://opi.mt.gov/Streamer/Instructional_Innovations/index.php#gpm1_3

Regional Service Area V Institute: August, 8-10, 2012, Missoula, Montana. http://www.wmcspd.org/calendar

Featured resource: Center On Instruction (COI) Resources for College and Career Ready Standards (including Common Core State Standards)

States seeking technical assistance with the implementation of college and career-ready standards such as those in the Common Core State Standards (CCSS) need guidance to implement these standards, including specific strategies and interventions to support low-achieving students, English language learners, and students with special needs. COI provides resources that can facilitate (1) planning or strengthening effective instructional programs, (2) supporting the alignment of instruction, (3) providing guidance on using student data to drive instruction, and (4) using instructional practice data to alter strategies in schools that are implementing college and career ready standards. Listed below are samples of COI's resources on this topic; for additional resources, click here. For other resources on Literacy, STEM/Mathematics/Science, Special Education, RTI (Response to Intervention), English Language Learning, Early Learning, and eLearning, please visit our website at http://centeroninstruction.org.

ENGLISH LANGUAGE ARTS AND LITERACY STANDARDS

Webinar: Taking a Look at the English Language Arts and Literacy Common Core State Standards: A COI Discussion. This Center on Instruction webinar provides an overview and an opportunity to explore and learn more about the Common Core State Standards as they relate to English Language Arts and Literacy from kindergarten to college and career readiness. **Read more…**

Student Center Activities Aligned to the Common Core State Standards. This publication from the Center on Instruction helps educators create differentiated reading instruction experiences for their students by showing the relationship between two distinct resources: Student Center Activities, created by the Florida Center for Reading Research as differentiated reading activities for use in small student groups, and the Common Core State Standards in English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects in K-5. **Read more…**

Intensive Interventions for Struggling Students in Reading and Mathematics. This guide from the Center on Instruction provides research-based guidance that reflects "best practices" for intensifying instruction in reading and mathematics for students with significant learning difficulties in K-12, including students with disabilities. It can also be used as a resource for instructional specialists and special education teachers who are searching for broad guidelines on the design and delivery of intensive interventions. **Read more…**

MATHEMATICS STANDARDS

Webinar: Common Core State Standards for Mathematics – What, How, When and How about YOU! This Center on Instruction webinar features Francis (Skip) Fennell, who provides an overview of the Common Core State Standards and the intended impact on the field of mathematics. **Read more…**.

Webinar: The Common Core State Standards for Mathematics in Grades 9-12. This Center on Instruction webinar provides an overview of the Common Core State Standards in Mathematics in Grades 9-12, with a focus on the mathematical practices. Fred Dillon reviews two models and their accelerated options, describes a reasoning approach to the materials that includes significant math opportunities for all students, and demonstrates different approaches for students with different abilities and the reality of the fourth year mathematics. **Read more…**

Webinar: Focusing on Mathematics State Standards: The Next Step toward a Coherent K-12 Experience for All Students. This Center on Instruction webinar discusses the National Council of Teachers of Mathematics (NCTM) PK-8 Curriculum Focal Points and how this new generation of state standards may look different in a post-Focal Point world. Cathy Seeley, former president of NCTM and a major contributor to the creation of the Curriculum Focal Points, also discusses the challenges of bringing focus and coherence from PK-8 to high school and what changes may be necessary as attention is shifted toward a more robust PK-12 experience for all students to be ready for college and the workplace. **Read more…**

Webinar: Implementing the Common Core State Standards for Mathematics. With an eye toward college and career readiness for all students and drawing on the principles of Response to Intervention, this webinar, which the Center on Instruction co-sponsored with

the Northwest Regional Comprehensive Center and the Alaska Comprehensive Center, focuses on recommended changes in curriculum, instruction, and programmatic support and shared resources, strategies, and timelines for a sensible implementation plan. This is one of a series of webinars especially designed to assist rural school staff with implementation of their School Improvement Grants (SIG). **Read more…**

Phoenix Rising: Bringing the Common Core Mathematics Standards to Life. In the Fall 2011 edition of *American Educator*, Hung-si Wu describes the potential of the Common Core State Standards in Mathematics, making a case for why these are important and why efforts need to be expended in ensuring that the standards are implemented. **Read more…**

Comparing the Common Core State Standards in Mathematics to the Recommendations of the National Mathematics Advisory Panel. This ACHIEVE brief describes the comparison between the Common Core State Standards and the National Mathematics Advisory Panel's (NMAP) recommendations found in Foundation for Success. **Read more…**

Common Core State Standards for Mathematics – Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards. This document helps states think about how the high school Common Core State Standards might be organized into four Model Course Pathways in Mathematics that provide college and career readiness. **Read more…**

SCIENCE STANDARDS

Webinar: Exploring the National Research Council's "Framework for K-12 Science Education". This Center on Instruction webinar discusses the NRC's Framework document as the first step toward creating new standards in K-12 science education. It highlights significant approaches that have implications for the development of those standards, such as a strong alignment with the Common Core Language Arts Standards focused on disciplinary literacy, the expansion of a broader set of science and engineering practices than described in previous standards and frameworks, and an emphasis on a developmental approach that leads to deeper understanding of a few big ideas in science. **Read more…**

STANDARDS AND RESPONSE TO INTERVENTION (RTI)

Webinar: Connecting RTI to New Priorities: Aligning Educational Initiatives. This Center on Instruction webinar discusses states' implementation of new priorities such as School Improvement Grants (SIG), college and career ready standards (including CCSS),

and meeting the needs of diverse student populations, and how these initiatives align with Response to Intervention (RTI). **Read more…**

Library-Information Literacy

Colet Bartow, Library-Information Literacy Curriculum Specialist
cbartow@mt.gov

School Library Data Survey Open through May 18th

In 1977, the Office of Public Instruction (OPI) released a comprehensive report of the status of school libraries in Montana. There were 9,000 paper surveys sent to county superintendents, superintendents, principals, teacher-librarians, public librarians, parents, trustees and students. Since that time there has not been a comprehensive survey or report completed that provides a clear picture of the status and health of Montana's school libraries. The OPI is asking for your assistance in collecting school library information in the interest of providing baseline data for planning purposes, school improvement, potential grant opportunities, or in preparation to apply for an alternative to accreditation standards plan. This voluntary survey is to be completed by the school library staff and submitted by the teacher-librarian by May 18, 2012.

Link to the Survey: http://www.keysurvey.com/votingmodule/s180/survey/339680/1132/

This brief survey opened Thursday, March 1. Instructions and a worksheet are provided with the survey to help plan for and gather information related to student services, policies, professional environment, technology and collection development.

Survey Checklist

- ☐ Preview the data collection PDF worksheet linked in the survey.
- ☐ Determine when the data will be collected between March 1 and May 18, 2012.
- ☐ Determine where/how data can be gathered.
- ☐ Identify stakeholders who can help with collecting data.
- ☐ Consider how you might use and report the data for program and school improvement.

Please contact Colet Bartow, Library-Information Literacy Curriculum Specialist, via e-mail at cbartow@mt.gov, with questions or concerns about the survey items or the data collection process. We greatly appreciate your time and interest in helping to create an accurate picture of our school libraries. We hope to exceed the 52 percent survey return rate that the 1977 study achieved.

Library-Information Literacy Curriculum Guide

A group of teacher-librarians from around the state met April 5th and 6th in Helena to work on a draft Library-Information Literacy Curriculum Guide. This updated guide will provide curriculum and program guidance for school libraries around the state. When the guide is finalized it will be available via the OPI Web site. If you are interested in providing feedback and review of the draft, please contact Colet Bartow, cbartow@mt.gov.

Looking Ahead to Summer Reading

In the next month, please be on the lookout for information about Superintendent Juneau's Summer 6 Reading Challenge information. The challenge addresses the need for students to continue to read during the summer break. As educators, we know that when students don't read over the summer, they're at risk for the "summer slide" and can quickly lose ground when they start school in the fall. The good news is that if students read just six books over the summer, they can maintain their comprehension skills and be ready to learn!

In the meantime, here's a great resource to help with reading advocacy efforts:

Scholastic's *You Are What You Read:* http://youarewhatyouread.scholastic.com/kids/

Books play an important role in shaping who we are and who we will become. You Are What You Read is a place for readers all over the world to connect with each other through their shared "Bookprints," as we celebrate the books that make us who we are today.

Once you sign up, you'll be able to input your Bookprint – the five books that were the most special to you. You'll then be able to connect with other kids who share the same books you like and discover new books to enjoy.

Pass It On is a part of You Are What You Read that allows you to share your favorite books with family members and friends – or someone in need! On the Pass It On page, you'll be able to select a book, print out a bookplate for your book, and pass it on!

The **Books Around the World Map** shows where users who have added a book to their Bookprint, "Liked" a book and Passed On or received a book are located.

NCCE 2012 Teacher Librarian Summit Resources Available

Please visit the TL Summit wiki to access strategies, uStream video recording and other resources from the March 14 event. http://2012tl.ncceconnect.org The following description from the conference program captures the big ideas from the Summit:

Dealing with Digital Information Successfully
What does it mean for our schools and libraries that information is going digital? The rise of the ebook is neither the end of the book nor the end of the librarian. Teacher-Librarians will

still be there to guide students and colleagues through the digital information wilds. Our mission is to find safe ways to get to "yes" for technologies that drive inquiry, creativity, and student engagement with digital learning.

Communication and Collaboration

SLMD Listserv – please e-mail Colet Bartow (cbartow@mt.gov) if you would like to be added to this highly informative listserv.

You can also visit the Montana Teacher-Librarian wiki (http://www.opi.mt.gov/groups/mtl) for more information and resources useful to Montana schools. Check out new resources for assessment, automation and facilities.

Mathematics

Jean Howard, Mathematics Curriculum Specialist
jhoward@mt.gov

The inaugural Rosenthal Prize, **$25,000 CASH,** is available to 4th through 12th grade math teachers. Application can be found at: The Museum of Mathematics, momath.org. Preference will be given to pedagogical innovation appropriate to the upper elementary or middle school classroom.

Math Reasoning Inventory (MRI) Marilyn Burns with funding from the Bill & Melinda Gates Foundation, for the past two years has been working with a team of colleagues to develop this online formative assessment tool. It's now available, **free** of charge, to all teachers
The goal of MRI is to help teachers find out what their students really understand about mathematics. MRI assesses students' numerical proficiency and asks questions that the Common Core expects all middle school students to answer successfully. A face-to-face interview is the core of MRI. And reasoning is the heart of MRI -- students solve most problems in their heads and always are asked to explain their strategies.

Information about the tool and how to sign up for a **free** account can be found on the MRI website: https://mathreasoninginventory.com/ . The website provides information about preparing to give MRI interviews and includes more than 80 video clips of actual interviews, samples of MRI reports, and the reasoning strategies students need to be numerically proficient.

Math Matters, Even for Little Kids, Published Online: March 27, 2012, Published in Print: March 28, 2012, as **Math Matters, Even for Little Kids,** By Deborah Stipek, Alan Schoenfeld, and Deanna Gomby. Premium article access courtesy of Edweek.org.

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Everyone knows that children who are not reading at grade level by 3rd grade are fated to struggle academically throughout school. Concerns about early literacy skills are justified because reading skills at kindergarten entry predict later academic achievement.

But guess what predicts later academic success better than early reading? Early math skills. In "School Readiness and Later Achievement," a widely cited 2007 study of large longitudinal data sets, University of California, Irvine, education professor Greg Duncan and his colleagues found that in a comparison of math, literacy, and social-emotional skills at kindergarten entry, "early math concepts, such as knowledge of numbers and ordinality, were the most powerful predictors of later learning." A large-scale Canadian study from 2010 echoes those findings: Math skills at school entry predicted math skills and even reading skills in 3rd and 2nd grade, respectively, better than reading skills at school entry. Although the mechanisms underlying such associations are not yet understood, the importance of early mathematics, and thus of access to it for all students, is clear.

Science

Kristen Crawford, Science Curriculum Specialist
kcrawford@mt.gov

Summer STEM Institute in Helena

Are you interested in learning more about the skills our Montana students will need in order to enter the workforce? Most of the job market places a high emphasis on Science, Technology, Engineering, and Mathematics (STEM) skills. This summer, come engage with business and industry to learn about the STEM-related job opportunities that currently exist and the skills required of students who may choose to enter these fields. Mark your calendars for August 13-17, 2012. Teacher teams will spend a week immersed in activities designed to inform them about the wide variety of STEM-related businesses that already exist in our state. No more than 30 teachers will be accepted and acceptance will be on a first-come, first-serve basis. Contact Kristen Crawford at kcrawford@mt.gov if you are interested. More details on this exciting opportunity to follow!

The Standards are Coming! The Standards are Coming!

The first public draft of the new *Next Generation Science Standards* will be released at the end of this month (April). The writing team for these new standards will be looking for feedback from everyone! Please visit the following website for updates on when they will be released: www.nextgenscience.org. There will be a three-week window of time for you to provide feedback. **Remember** that these new standards will be based on the new *Framework for K-12 Science Education.* If you are not familiar with this document, please

visit the following site where you may download it for free: A Framework for K-12 Science Education (see information about an upcoming webinar on the framework below).

***A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas:* A FREE Webinar Introduction**

APRIL 17, 2012 at 12:30 PM (MDT)

If you are interested in learning more about this framework document released by the National Research Council in July 2011, you will not want to miss this informative webinar! The framework identifies the key scientific ideas and practices all students should learn by the end of high school. The framework will serve as the foundation for new K-12 science education standards, which are currently being developed by a group of 26 states coordinated by the nonprofit group Achieve. The framework is also designed to be used by curriculum and assessment developers, teacher educators, and others in K-12 science education.

Join the April 17, 2012, webinar to learn about the framework, how it was developed, and how it will impact the way science is taught in K-12 classrooms. You will also have an opportunity to ask questions of the presenters.

Presenters:

Thomas Keller, co-director of the project to develop the framework, and senior program officer, Board on Science Education, National Research Council

Heidi Schweingruber, co-director of the project to develop the framework, and deputy director, Board on Science Education, National Research Council

Date: April 17, 2012
Time: 12:30 - 2:00 p.m. (MDT)
Register Now
Visit us online to learn more about the framework. You can purchase printed copies of the framework at a discount from the National Academies Press.When you check out, enter discount code FBOSE2.

Montana PBS Seeks Classroom Collaboration

Montana PBS and The University of Montana Paleontology Center (UMPC) are applying for a grant to produce a television show targeting 7th - 10th graders for distribution on Montana PBS. We would love to include students or classes that are doing their own research in paleontology and are interested in the UMPC's collections. If funded, production will begin late fall 2012, so spring 2013 would be a great time to collaborate! Please contact Alison Perkins at the following e-mail address if you are interested: alison.perkins@mso.umt.edu.

14th Annual Water Summit for Montana Teachers and Students
May 9-11, 2012

Come participate in a natural resources learning experience that addresses watershed issues in Montana. This year's focus is on wetlands. Come ready to work hard and play hard!

Location: MSU—Billings
Estimated Cost: $25/Student*
Wed: 2:00 pm-6:00 pm, dinner
Thurs: 9:00 am-9:00 pm, all meals
Fri: 9:00 am-2:00 pm, breakfast and lunch

*Cost includes lessons, tours, meals, accommodations, substitute teacher fees, and most travel expenses. Cost for teachers is $45. Scholarships are available for people in need.

Activities and Lessons

~Visit local wetlands and riparian areas—urban and rural, natural and constructed
~Explore impacts of Yellowstone River oil spill
~Wetlands' role in water quality protection and flood control
~Participate in group problem-solving watershed activities
~Practice water monitoring protocols.
~Share your water monitoring activities with peers.

For registration information or questions please contact Stephanie at mcginnis@montana.edu

***The deadline to register has been extended so please get your information submitted soon!**

TEDx Bozeman Featured Paul Andersen
2011 Montana Teacher of the Year

Recently, the community of Bozeman hosted its first-ever TEDx event. TEDx events are based on the same premise as the very well-known Ted Talks (www.ted.com) but hosted by local communities. TED, which stands for Technology, Entertainment, and Design, is a nonprofit organization that is devoted to "Ideas Worth Spreading." The Bozeman event provided a tremendous venue for shining the light on Montanans that have accomplished some amazing things!

One such presenter was Bozeman's very own **Paul Andersen**, biology teacher and Montana's 2011 Teacher of the Year. Paul shared a tremendous talk on how he has incorporated gaming into his classroom instruction. You can view Paul's presentation (and the other tremendous presenters) by doing the following:

1. Go to the following site: www.tedxbozeman.com/live
2. Click on the video tab on the right-hand side of the screen.

3. Click on the TEDx Bozeman Session 2 tab.

4. Paul's presentation can be found by fast-forwarding to 53:00, but all of the presentations are worth watching!

New Nationwide Poll Shows Strong Support for Improving Science Education

A recent poll released shows that "voters are virtually unanimous- 97 percent - in believing that improving the quality of science education is important to the United States' ability to compete globally." These results are exciting in light of the movement toward new national science standards. Read more about these results

NSTA Seeks Elementary-Level Lessons for New Book- Deadline to apply is April 16, 2012

To support K–5 teachers making the challenging transition to the new *Framework for K–12 Science Education* and the forthcoming *Next Generation Science Standards*, the Science Teachers' Association of New York State and the National Science Teacher's Association (NSTA) Press are developing a new book tentatively titled *Science Literacy & Our Nation's Future*.

The book will provide a blueprint for elementary teachers to plan ahead for aligning their instruction with the spirit and principles of the new Framework. A key section of the book will feature lesson plans from outstanding educators. NSTA invites educators to consider submitting lessons for this project. Visit the book project website to learn more and submit online application by April 16, 2012. Authors of selected applications will be invited to develop full lessons for inclusion in the new book.

Take a Free Behind-the-Scenes Expedition to the Arctic with your Students this Earth Day

Join producers and scientists from Discovery Channel's groundbreaking series *Frozen Planet* for a free LIVE classroom webinar.

Earth Day: What the Ice and Penguins Tell Us About Our Changing Planet
Presented by:
Dan Rees (Producer)
Bob Bindschadler (Scientist)
Ron Naveen (Scientist)

Thursday, April 12, 2012, 1:00 pm ET
For Classrooms (K-12)

REGISTER TODAY

More Information

This Earth Day, take the ultimate expedition with your students to explore the Arctic and Antarctic poles like never before. Join producers and scientists from Discovery Channel's groundbreaking series, *Frozen Planet*, to hear about their experiences filming the series in the polar regions and the work they are doing each and every day to study the evolving landscape and ecosystems there. They will discuss how their career lets them make a positive impact on the environment every day, and what students can do to make a difference. Every student has the power to help protect our environment, from their local community all the way to the poles. Students will even see exclusive sneak peeks of yet-to-be-aired episodes of the series! Don't miss this exciting **live** event. **Click here to learn more.**

Astronomy Day- April 21, 2012

Are you interested in learning hands-on NASA-themed activities to use in the classroom while earning Montana OPI Renewal Units in the process? The Museum of the Rockies in Bozeman is hosting Astronomy Day 2012 this year on Saturday, April 21.
Four different educator workshops are being offered:

1) **Mars Bound** – Just like NASA mission planners, participants will design a simulated mission to the Martian surface, solving issues of mass, power and cost.
2) **Mars Uncovered** – Think like a planetary scientist and analyze pictures of the Martian surface. Identify craters and channels to learn about the geologic history of Mars.
3) **NASA Education Activity Training** – Learn NASA-themed activities that focus on our Solar System, the Sun, Space Weather, and the last Transit of Venus of our lifetime.
4) **Ice in the Solar System** – Participants will learn how we know it exists, and how it can be taught in the classroom.

To register, visit: http://www.montana.edu/wwweduc/nasa/astroday2012.shtml
Make it a family day and bring your kids for the main events from 1:00 -4:00 pm! David H. Levy, co-discoverer of the Shoemaker-Levy 9 comet that impacted Jupiter will be speaking and signing autographs, and so will Jaime Waydo, an MSU graduate who is an engineer for the Mars Curiosity Mission at NASA's Jet Propulsion Laboratory.

We will be having several NASA, MSU, and local exhibitors with give-aways, kids' activities, planetarium shows and solar viewing!

All Astronomy Day 2012 activities and museum admissions are free to the public.
For more information, please visit: http://eu.montana.edu/astronomyday/

STEM Websites and Resources

Need more ideas and resources for STEM? Check out the following great sites:

100+ STEM Websites and Webtools for Teachers

Siemens STEM Academy

Discovery Channel Frozen Planet Videos (Criminal Penguin)

Computer Science "Bits and Bytes" Free Resource

Sign up at: www.nsf.gov/cise/csbytes/ for the NSF Computer Science biweekly newsletter for the classroom. This resource is free and has lots of great materials for the classroom that focus on interesting real-life applications of computer engineering. The NSF *CS Bits & Bytes* series is aimed at high school teachers and students and emphasizes how computer science permeates and improves our lives and supports progress in many other disciplines. *CS Bits & Bytes* issues include profiles of the individuals who do this exciting work and include links to interactive activities and videos.

Disney's Planet Challenge

It's never too early to start planning! Disney's Planet Challenge (DPC) encourages elementary and middle school students across the nation to plan and implement ventures to benefit the environment and their local communities. **Prizes will be awarded to all students and teachers who submit a project.** First prizes will be awarded to both an elementary and a middle school project. The first prize includes teacher and school cash awards as well as a trip to Walt Disney World for all participating students and teachers. Second, third, and fourth-place winners also receive cash prizes and Disney memorabilia. Each state that submits a project also has the chance to win the state award that includes a $1,000 cash prize for the winning teacher. To begin the process and find out more about this tremendous project-based learning opportunity, go to the following site: www.disney.com/planetchallenge. Don't let this opportunity pass you by- at least one Montana project will win $1,000!